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107-18 CIVIL LAW DEPOSITION
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East Poplar Oil Field
Enforcement Case

DEPOSITION - FALINDA



IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
BILLINGS DIVISION

CARY G. YOUPEE; D. DWIGHT)
YOUPEE; JOSI YOUPEE; RENE)
MARTELL; MARVIN K. YOUPEE, SR.,)
individually and as represen-)
tative and next friend of)
MARVIN YOUPEE, JR., WILLIAM)
YOUPEE III, IRIS YOUPEE, and)
BRITTANY YOUPEE; EUGENE ABBOTT;)
MARGARET ABBOTT; CHARLES FOUR) CV-98-108-BLG-JDS
BEAR, individually and as)
representative and next friend) DEPOSITION OF
of JORAY FOUR BEAR, JONATHON) FALINDA R. HALL
LITTLE WHIRLWIND, AVA LEE)
LITTLE WHIRLWIND and CHARLES)
FOUR BEAR II; ANNA FOUR BEAR;)
GEORGE F. RICKER, SR.; HELEN)
RICKER; GEORGE F. RICKER, JR.,)
individually and as represen-)
tative and next friend of ERIN)
RICKER; WILLIAM T. RICKER;)
ABIGAIL REDDOOR; IRMA REDDOOR;)
LAURA BLEAZARD, individually)
and as representative and next)
friend of DAVID BLEAZARD; ROSS)
BLEAZARD; ERICA BLEAZARD;)
TRIVIAN GRAINGER, individually)
and as representative and next)
friend of DANIEL GRAINGER and)
ADAM GRAINGER; DAVID GRAINGER;)
DAWN GRAINGER; DENISE GRAINGER,)
individually and as represen-)
tative and next friend of)
JORDAN GRAINGER, JAY GRANDCHAMP)
and TINA KOHL; DONNA BUCKLES-)
WHITMER; WARREN WHITMER; and)
ALLEN YOUPEE,)
Plaintiffs,)
v.)
MURPHY EXPLORATION & PRODUCTION)
CO., a Delaware corporation;)
MESA PETROLEUM CO., a Delaware)
corporation; PIONEER NATURAL)
RESOURCES USA, INC., a Delaware)
corporation; SAMSON HYDRO-)
CARBONS COMPANY, an Oklahoma)

1 corporation; MARATHON OIL, an)
 2 Ohio corporation; and JOHN DOES)
 10 through 50,)
 Defendants.)

4
 5 DEPOSITION

6 OF

7 MS. FALINDA R. HALL,

8 called for examination by counsel for plaintiffs at
 9 the Moulton Law Firm, 1900 Sheraton Plaza, 27 North
 10 27th Street, City of Billings, County of Yellowstone,
 11 State of Montana, commencing at 09:05:44 on Tuesday,
 12 June 19, 2001.

13 APPEARANCES

14 For the Plaintiffs: MR. BRIAN K. GALLIK
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16 For the Defendant MR. MICHAEL E. WEBSTER
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Also Present
Until Indicated:

MR. ANDREW BILLSTEIN
MR. RYAN HEFFERNAN
MR. JEFF SORENSON

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REPORTER'S NOTE: "Uh-huh" and "Um-hmm" indicate affirmative responses. "Huh-uh" and "Hmm-um" indicate negative responses.

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1 MS. FALINDA R. HALL,
 2 called for examination by counsel for plaintiffs,
 3 after having been first duly sworn to testify the
 4 truth, the whole truth, and nothing but the truth,
 5 testified as follows:
 6 EXAMINATION
 7 BY MR. GALLIK:
 8 Q. Would you please state your name?
 9 A. Falinda R. Hall.
 10 Q. Falinda, did you get a copy of a notice of
 11 deposition in this particular case that I had prepared
 12 with respect to various topics that you might be asked
 13 questions about?
 14 A. Yes, I did.
 15 (Exhibit 50 was marked for identification.)
 16 BY MR. GALLIK:
 17 Q. I'm just going to mark this as Exhibit 50 and
 18 hand this to you and ask if that appears to be the
 19 same copy of notice of deposition that you have
 20 reviewed.
 21 A. Yes, it is.
 22 Q. Okay. Falinda, what is your address?
 23 A. My work address?
 24 Q. Yes, please.
 25 A. 1501 Stampede Avenue, Cody, Wyoming 82414.

6

1 Q. What is your occupation?
 2 A. I'm currently a production supervisor.
 3 Q. And you're a production supervisor for whom?
 4 A. Marathon Oil Company.
 5 Q. How long have you held that position?
 6 A. Two and a half months.
 7 Q. Okay. Have you been with Marathon Oil for a
 8 period of longer than two and a half months?
 9 A. Yes.
 10 Q. Okay. How long have you been with Marathon Oil?
 11 A. Twenty-two years.
 12 Q. By way of summary of your various positions with
 13 Marathon Oil, could you just give a general summary of
 14 what those positions have been?
 15 A. I have been, most of that time, production and
 16 reservoir engineer.
 17 Q. In general, what does a production and reservoir
 18 engineer do?
 19 A. The reservoir engineers would be responsible for
 20 selecting well locations, optimizing waterflood work.
 21 A production engineer would be responsible for
 22 well work, specifically stimulation work, completion
 23 on new drill wells, monitoring production, repairing
 24 failures.
 25 Q. When we talk about wells, are we talking about

7

1 oil wells?
 2 A. Oil wells, gas wells.
 3 Q. Okay. Salt injection wells?
 4 A. Water disposal wells, water injection wells, yes.
 5 Q. By way of your educational background, could you
 6 summarize that for me?
 7 A. I graduated from Montana Tech in Butte in 1979
 8 with a bachelor of science in petroleum engineering
 9 and a bachelor of science in geological engineering.
 10 Q. Any postgraduate work since 1979?
 11 A. No.
 12 Q. So if my math is correct, then you pretty much
 13 have worked with Marathon Oil since you graduated from
 14 college?
 15 A. Yes, I have.
 16 Q. Falinda, have you had your deposition taken
 17 before?
 18 A. Yes.
 19 Q. Have you had it taken in the capacity of a
 20 corporate representative, then?
 21 A. Yes.
 22 Q. Approximately how many times would you estimate
 23 you've had your deposition taken?
 24 A. Once.
 25 Q. Can you tell me about the circumstances of that

8

1 particular case?
 2 A. It was pertaining to a gas storage reservoir in
 3 the Sidney, Nebraska area.
 4 Q. And what was the problem with the gas storage
 5 reservoir?
 6 A. There was an allegation that we were stealing the
 7 gas from another company's gas storage reservoir.
 8 Q. I assume you weren't stealing?
 9 A. We didn't feel we were.
 10 Q. So you've not testified in a case where it was
 11 alleged that Marathon or Texas Oil & Gas was somehow
 12 responsible for the contamination of groundwater by
 13 virtue of its oil and gas production activities?
 14 A. No, I have not.
 15 Q. In terms of your preparation for this particular
 16 deposition, can you tell me what documents you've
 17 reviewed?
 18 A. I reviewed the well record files for each of the
 19 three wells that TXO drilled and operated, and I
 20 reviewed the responses to the interrogatories, and I
 21 have reviewed TXO's environmental and safety policies.
 22 Q. Okay. In terms of the answers to
 23 interrogatories, I guess, is what you had reviewed,
 24 written discovery requests, did you have any role in
 25 helping initially to answer those questions?

9

1 A. No, I did not.
 2 Q. When were you aware that you would be the
 3 corporate representative for this deposition?
 4 A. Approximately one month ago.
 5 Q. Okay. Does Marathon currently – or strike that.
 6 Aside from Marathon's acquisition of Texas Oil &
 7 Gas – is that a correct term to use, "acquisition"?
 8 A. U.S. Steel Corporation purchased Texas Oil & Gas.
 9 Q. Okay.
 10 A. Texas Oil & Gas, TXO, was later merged with
 11 Marathon. They were both subsidiaries of U.S. Steel.
 12 Q. And do you know approximately what year that took
 13 place?
 14 A. That merger became effective the close of
 15 business December 31, 1990.
 16 Q. Okay. Apart from the Texas Oil & Gas merger,
 17 corporate reorganization, whatever you want to call
 18 it, has Marathon ever conducted any oil and gas
 19 activities in the East Poplar Oil Field?
 20 A. Not to my knowledge.
 21 Q. And what I talk about, the East Poplar Oil Field,
 22 you know that to be up in northeastern Montana,
 23 outside the city of Poplar?
 24 A. Yes.
 25 Q. And if I ask a question, of course, that you

10

1 don't understand, make sure that you ask me, and I
 2 will do my best to clarify.
 3 A. Okay.
 4 Q. As I understand it, Marathon's predecessor with
 5 respect to these oil wells was Texas Oil & Gas,
 6 correct?
 7 A. Yes.
 8 Q. And they drilled three wells –
 9 A. Yes.
 10 Q. – in the East Poplar Oil Field?
 11 A. Yes.
 12 Q. And as I understand it, those are the only three
 13 wells that Texas Oil & Gas had in the East Poplar Oil
 14 Field?
 15 A. Those were the only three files that I reviewed.
 16 Q. Okay. Do you know whether there were any other
 17 wells?
 18 A. I do not.
 19 Q. Okay. Those three wells would be Buckles A-1,
 20 correct?
 21 A. Yes.
 22 Q. Saltwater Disposal Well No. 1?
 23 A. Yes.
 24 Q. And when I see the letters "SWD," I take it that
 25 means "saltwater disposal"?

11

1 A. I believe so, yes.
 2 Q. Okay. And then Buckles B-1; is that correct?
 3 A. Yes.
 4 (Exhibit 51 was marked for identification.)
 5 BY MR. GALLIK:
 6 Q. Let me show you a map. I'll show everyone. I'm
 7 sure you recognize this map (indicating). For the
 8 record, I've identified as Exhibit 51 a Water
 9 Resources Investigations Report map, Plate 3 of 3.
 10 Shorthand, this came from the Thamke report, if that's
 11 fair with counsel here.
 12 Have you seen this map before?
 13 A. Yes, I have..
 14 Q. Now I've highlighted in yellow here a number of
 15 wells, actually four. Do three of those highlighted
 16 wells reflect the Texas Oil & Gas wells that we are
 17 talking about today?
 18 A. Yes, they do.
 19 Q. Okay. Can you tell me, the saltwater disposal
 20 well, would that be TXO-SWD-1?
 21 A. Yes, it would.
 22 Q. So as far as you know, those are the only wells
 23 that Texas Oil & Gas had in the East Poplar Oil Field?
 24 A. Yes.
 25 Q. Just by way of background, when an oil company, I

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1 guess Marathon, since that's who you're here on behalf
 2 of, drills an oil well, is it common to enter into a
 3 contract with a driller to drill the well?
 4 A. Yes.
 5 Q. Okay. And that contract would be between the
 6 producer, Marathon, and the driller? Would that be
 7 fair?
 8 A. Yes.
 9 Q. Okay.
 10 (Exhibit 52 was marked for identification.)
 11 BY MR. GALLIK:
 12 Q. I'm going to hand you what I'll mark Exhibit 52,
 13 and I didn't make a copy for counsel, Bates No. 166,
 14 which is a bid sheet and well specifications for
 15 standard drilling contract. Have you seen this
 16 before?
 17 A. No, I have not.
 18 Q. Okay. Have you seen a similar sort of document
 19 in your position before with respect to oil drilling
 20 contracts?
 21 A. No, I have not.
 22 Q. Okay. Let me ask you, do you work at all with
 23 respect to working with the drilling contractors with
 24 respect to their duties and responsibilities with
 25 respect to drilling oil wells or gas wells?

13

1 A. No, I do not.
 2 Q. Okay. Who in your company would be responsible
 3 for handling those types of activities?
 4 A. We have a drilling department whose primary job
 5 is to negotiate and make those contract agreements.
 6 Q. Okay. I have the only copy here, and I will ask
 7 you a couple of questions. If you don't know the
 8 answer, just let me know.
 9 A. All right.
 10 Q. Paragraph 8.1 states, "Contractor agrees to
 11 perform all work to be conducted by it under the terms
 12 of this Agreement with due diligence and care in a
 13 good and workmanlike manner and in accordance with
 14 good drilling practices."
 15 Based upon your position with Marathon Oil, can
 16 you tell me what the industry standards would be for
 17 good and workmanlike manner for purposes of drilling
 18 an oil well?
 19 A. I don't know.
 20 Q. And again, who would be the person in your
 21 company, if you know, who could tell me what the
 22 standard of care would be for good and workmanlike
 23 practices?
 24 A. Someone in the drilling department.
 25 Q. Do you have any responsibility in your position

14

1 with respect to issues such as pollution or
 2 contamination that are associated with drilling
 3 operations or may be potentially associated with
 4 drilling activities?
 5 A. No, I do not.
 6 Q. Okay. So you couldn't tell me if it's a common
 7 practice to have the drilling contractor responsible
 8 for all pollution on the surface and the company
 9 responsible for all pollution below the surface?
 10 A. I don't know.
 11 Q. And again, the person that would be knowledgeable
 12 with respect to those sorts of issues would be in the
 13 drilling department?
 14 A. Yes.
 15 Q. You testified earlier that you reviewed the –
 16 correct me if I use the wrong terminology here – the
 17 well files for the three wells that we're talking
 18 about today?
 19 A. Yes.
 20 Q. I believe those files were produced in discovery
 21 here today.
 22 Did you, through your review of those documents,
 23 indicate that there were any problems encountered
 24 while drilling and completing the Saltwater Disposal
 25 Well No. 1?

15

1 A. There were some problems with surface water
 2 flows.
 3 Q. Okay. And when you talk about problems with
 4 surface water flows, what does that mean?
 5 A. That there was water flowing to the surface when
 6 they were trying to cement the casing in place.
 7 Q. Okay. And is that a problem that is common in
 8 the industry?
 9 A. I am not familiar with that particular area of
 10 the country, so I couldn't tell you if it's common or
 11 not in that area.
 12 Q. Okay. So in terms of the oil business, depending
 13 on where the well is being drilled, that has an impact
 14 on whether water flowing to the surface could be a
 15 problem?
 16 A. Possibly, yes.
 17 Q. Are there other sources of water flowing to –
 18 other sources of problems that would cause water to
 19 flow to the surface?
 20 A. I don't know.
 21 Q. What reasons are there for water to flow to the
 22 surface when one is drilling an oil well or saltwater
 23 disposal well?
 24 A. If your hydrostatic head of the fluids above that
 25 zone is less than the pressure in the zone that you

16

1 encounter, a flow would occur.
 2 Q. Okay. That was a good scientific response. I'm
 3 going to have to break that down so I can understand
 4 it.
 5 Based upon your review of the records here – let
 6 me just ask it this way. In other words, if you
 7 encounter an area of pressurized zone, let's say, that
 8 contains water, and you pierce that and the casing is
 9 not solid around the well itself, will that cause the
 10 water, then, to go to the surface?
 11 A. No. The casing is going to be solid as it goes
 12 through there.
 13 Q. The casing will be solid, but it's going through
 14 the ground, correct?
 15 A. Yes.
 16 Q. And then the cement that goes, then goes around
 17 the casing, correct?
 18 A. Um-hmm.
 19 Q. And what's the purpose of the cement that goes
 20 around the casing?
 21 A. To hold the casing in place.
 22 Q. Okay. And does that cement also serve the
 23 purpose of preventing water from coming up the outside
 24 of the pipe?
 25 A. Yes, it does.

17

1 Q. Is that a potential source, then, of water
2 flowing to the surface, then, water coming outside the
3 pipe itself to the surface?
4 A. If the cement is not solid around that pipe,
5 between the pipe and the formation.
6 Q. Okay. And when you talk about the formation, the
7 formation would be the formation where the water that
8 is flowing to the surface comes from, correct?
9 A. I would define the formation as any rock that has
10 been drilled through.
11 Q. Okay. So I understand this correctly, then,
12 let's say you've drilled to 100 feet and there is a
13 zone of water at 50 feet. Just because your drill bit
14 is at 100 feet doesn't mean the water is coming from
15 100 feet? It could be coming from the zone at
16 50 feet; is that correct?
17 A. I can't say that for sure.
18 Q. Okay. Based upon your review of the files in
19 this case, the water that was flowing to the surface,
20 do you know, did that come up from the outside of the
21 casing or from the inside of the casing?
22 A. The reports indicated it was coming on the
23 outside of the casing.
24 Q. Okay. And the reason for the cement, then,
25 that's to fix the problem, I take it, to stop the

18

1 water from flowing up to the surface; is that correct?
2 A. And to support the casing in place.
3 Q. Correct. Okay. So the cement serves two
4 purposes, then?
5 A. Yes.
6 Q. It supports the casing and prevents water from
7 flowing to the surface?
8 A. Yes.
9 Q. When a person drills a well below the surface of
10 the earth, does it pass through various -- are there
11 various types of zones that the well bit passes
12 through?
13 A. Yes.
14 Q. Some of those could be rock or dirt, correct?
15 A. Yes.
16 Q. Others could be zones containing drinking water
17 or, let's just say, water?
18 A. Yes.
19 Q. Another zone could have water with a high
20 concentration of sodium chloride, for example?
21 A. Yes.
22 Q. Okay. Is it the case, then, that if your cement
23 casing from the surface down to the very bottom zone
24 that you're drilling in -- let's say the bottom zone
25 is, oh, a zone that has water in it -- in order for

19

1 that water to reach the surface, it would have to pass
2 through all of the zones that it had already passed
3 through, correct?
4 A. Yes.
5 Q. Based upon the review of the records that you saw
6 with respect to the saltwater disposal well, what type
7 of water, if you know, was flowing to the surface?
8 A. I could find nothing that indicated what kind of
9 water was flowing to the surface.
10 Q. Okay. So from your review of the records, there
11 were no chemical analyses conducted of the water?
12 A. No.
13 Q. And from your review of the records, you could
14 not tell from which zone the water was coming from?
15 A. No, I could not.
16 Q. Okay. From your review of the records, could you
17 tell if there were more than one water zone through
18 which the well passed before it started having water
19 come to the surface?
20 A. No, I could not.
21 Q. So what we know, then, is that water was flowing
22 to the surface as a result of problems with the cement
23 casing with respect to this particular saltwater well?
24 A. Yes.
25 Q. That happened on one occasion or more than one

20

1 occasion?
2 A. I believe they tried to repair or -- it was over
3 the course of five days before they were able to stop
4 the water flow.
5 Q. And from the records that you were able to
6 review, was there any way of telling how much water
7 had reached the surface?
8 A. No, there was not.
9 Q. Have you dealt with the problem of water
10 traveling to the surface before as a result of
11 problems with the cement casing in other wells?
12 A. No, I have not.
13 Q. Would that be an area that you would be familiar
14 with, or do you just know about that by virtue of your
15 review of these records?
16 A. Would you repeat that, please?
17 Q. Sure. I'm just trying to figure out if the
18 problem of water coming to the surface because of
19 problems with the cement casing is something that is
20 associated with oil wells, based upon your experience,
21 or is that something new to you just because you don't
22 work in that area and you just happened to read these
23 records?
24 A. In all of the well record files that I have read
25 in my job, this is the only time that I have ever seen

21

1 a surface water flow.
 2 Q. Okay. For any reason?
 3 A. For any reason.
 4 Q. Okay. From your review of the records with
 5 respect to the surface water flow from the saltwater
 6 disposal well, are you capable of characterizing how
 7 much water was flowing to the surface? I know we
 8 can't talk about gallons, but you indicated it was
 9 over a course of five days.
 10 A. I have no way of knowing how much there was.
 11 Q. Okay. And from your review of the records,
 12 you're only able to say it was over the course of five
 13 days?
 14 A. Yes.
 15 Q. From your review of the records, is it possible
 16 to determine -- strike that.
 17 Correct me if I'm wrong, but your testimony was
 18 you did not know from which zone the water was coming
 19 from; is that correct?
 20 A. That's correct.
 21 Q. Are you knowledgeable with underground geology in
 22 general to answer a question that, if water is flowing
 23 to the surface from, let's say, 200 feet below the
 24 surface and there are various zones, is it possible
 25 for the water, before it reaches the surface, to

22

1 stretch out into other zones that are under the
 2 earth's surface?
 3 A. That fluid will seek the lowest pressure. If the
 4 lowest pressure is at the surface, it will
 5 preferentially flow to the surface.
 6 Q. Okay. So it will go right to the top, then?
 7 A. To the lowest pressure.
 8 Q. The lowest pressure.
 9 So I'm clear on this, the one problem that you
 10 were able to discover with respect to the saltwater
 11 disposal well concerned the water flowing to the
 12 surface for a period of approximately -- over a period
 13 of five days?
 14 A. Yes.
 15 Q. Any other problems with the saltwater disposal
 16 well that you were aware of?
 17 A. No.
 18 Q. Once this well was completed, from your review of
 19 the records, did Marathon -- I'm sorry, Texas Oil &
 20 Gas inject saltwater into the Judith River
 21 formation?
 22 A. Yes, they did.
 23 Q. From your review of the records, were you able to
 24 estimate how much saltwater was injected into the
 25 formation?

23

1 A. About 460,000 barrels.
 2 Q. In the review of the discovery requests that we
 3 sent to Marathon, one of the objections was to our use
 4 of the words "brine" and "saline" water, and the
 5 response was "water containing excessive amount of
 6 sodium chloride."
 7 When we use the term "saltwater" today in this
 8 deposition, are we talking about water having
 9 "excessive amount of sodium chloride"?
 10 A. I guess my interpretation of "water" is the water
 11 that was produced from the oil producing well and
 12 reinjected or injected into the saltwater disposal
 13 well.
 14 Q. Okay. And the records indicate that there was,
 15 as I understand it, at least one test done of the
 16 sodium concentration of the water from the production
 17 of the well, correct?
 18 A. Yes.
 19 Q. And would it be fair to say that the results of
 20 that test indicated the presence of sodium chloride?
 21 A. Yes.
 22 Q. And that's common, is it not, to have water with
 23 sodium chloride injected back into the well?
 24 A. I'm not real comfortable. The water production
 25 that I'm familiar with is a much lower TDS

24

1 concentration, so I am not really qualified to answer
 2 what sodium level is high.
 3 Q. The sodium levels that you're familiar with, is
 4 that a result of working in different oil fields?
 5 A. Yes.
 6 Q. Okay. What oil fields are you most commonly
 7 working in?
 8 A. The ones in northwestern Wyoming.
 9 Q. Okay. So just so I understand it, you personally
 10 have had no working experience up in the East Poplar
 11 Oil Field?
 12 A. No.
 13 Q. The discovery I've reviewed indicates that the
 14 saltwater disposal well was eventually abandoned; is
 15 that correct?
 16 A. Yes.
 17 Q. How does an oil company plug and abandon a well?
 18 A. They submit a proposed flooding procedure to the
 19 agencies responsible, the BLM or oil and gas
 20 commission, and then the wells are plugged according
 21 to an approved procedure.
 22 Q. And that procedure is developed by whom? The oil
 23 company working with the regulatory agency, or is it
 24 the regulatory agency telling the producer what to do?
 25 A. The oil company submits the proposed plan, but it

25

1 does include some regulations or requirements set out
2 by the governmental agency.
3 Q. Okay. So you submit that plan to the regulatory
4 agency. They review that plan, correct?
5 A. Um-hmm.
6 Q. And if they approve of the plan, then the company
7 goes into the field and plugs the well according to
8 the plan; is that correct?
9 A. Yes.
10 Q. Can you describe in general for me how the
11 saltwater disposal well in this case was plugged and
12 abandoned?
13 A. I believe the perforations through which the
14 saltwater had been injected into the Judith River
15 formation were cement squeezed, and cement plugs were
16 placed in the well bore.
17 Q. When you use the word "cement squeezed" –
18 A. Cement is forced out through the holes in the
19 pipe to seal them off and prevent inflow back into the
20 well.
21 Q. So, in other words, to prevent the water from
22 coming back up the pipe?
23 A. Yes.
24 Q. Okay. And then you used another word, "plugged,"
25 "concrete plug." Is that the same as "squeeze"?

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1 A. No. A concrete plug would be just a volume of
2 cement placed within the pipe, in a certain interval
3 within the pipe, a specified interval.
4 Q. So you don't actually fill up the entire pipe?
5 Just at specified intervals?
6 A. I don't remember if, in the saltwater disposal
7 well, if the entire pipe was filled or not.
8 Q. Is there a standard practice in the industry,
9 based upon your work in the industry, of how one
10 cements the casing?
11 A. They're plugged according to the approved
12 procedures.
13 Q. So that approved procedure is what the government
14 permits based upon what the company has submitted?
15 A. Yes.
16 Q. It's not always the case, then, that you just
17 cement the entire well casing from top to bottom?
18 A. No.
19 Q. It may be at various intervals?
20 A. Yes.
21 Q. And from your review of the records in this case,
22 can you tell at which intervals the cement casing or
23 the cement plugs were placed?
24 A. Yes, you can from the records. I don't remember
25 where they were.

27

1 Q. Before Marathon – I'm going to use the word
2 "acquired" loosely to shortcut how we got from
3 Texas Oil & Gas to Marathon. Before Marathon acquired
4 Texas Oil & Gas, do you know whether there was any
5 sort of due diligence environmental audit performed of
6 any of the properties acquired by Marathon?
7 A. No, I don't know that.
8 Q. Okay. Do you know whether that is a practice of
9 Marathon, to conduct a due diligence audit before it
10 acquires properties from another company?
11 A. I am not sure.
12 Q. Okay. And do you know who would know that
13 answer?
14 A. Someone in the business development group.
15 Q. So in terms of your duties and responsibility,
16 you're not involved in evaluating properties for
17 potential acquisition? You work more on the
18 production end of things once the property is within
19 the company itself?
20 A. Yes.
21 Q. By the way, if at any time you want to take a
22 break, just let me know.
23 A. Okay.
24 Q. In my review of the documents, I see occasionally
25 the words used "pollution" or "contamination." What

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1 does the term "pollution" mean to you?
2 A. Something that's not normally meant to be there.
3 Q. So if we have saltwater, water containing
4 excessive amounts of sodium chloride, in what was
5 otherwise an aquifer of drinking water, would that be
6 pollution?
7 A. Yes.
8 Q. Okay. Does Marathon have an environmental policy
9 in general concerning pollution?
10 A. I'm not sure.
11 Q. Okay. In your daily operations as a – is it a
12 production manager?
13 A. (Nodded head affirmatively.)
14 Q. Is that correct?
15 A. Production supervisor.
16 Q. – production supervisor, does the prospect of
17 pollution play any role in your decisions that you
18 make as a supervisor?
19 A. Definitely.
20 Q. Okay.
21 A. The first comment to me was, "Your No. 1 priority
22 is environmental and safety."
23 Q. And that would have been back in 1979?
24 A. That is in my current job.
25 Q. Oh, your current job. And that was two and a

29

1 half months ago?
 2 A. (Nodded head affirmatively.)
 3 Q. And you've been with Marathon for 20-plus years?
 4 A. (Nodded head affirmatively.)
 5 Q. Was the issue of pollution one that came to your
 6 attention prior to two and a half months ago in
 7 working with Marathon?
 8 A. Yes.
 9 Q. So you don't know what Marathon's policy is with
 10 respect to pollution with respect to oil and gas
 11 operations?
 12 A. Their policy is to report any and all spills
 13 immediately; to clean them up as soon as possible;
 14 ideally, to prevent all damage to the environment.
 15 Q. And so in terms of how Marathon conducts its
 16 business operations, would it be fair to say that they
 17 try to conduct those operations so as to prevent all
 18 damage to the environment?
 19 A. Yes.
 20 Q. And you used the word "ideally." Why did you use
 21 the word "ideally"?
 22 A. We cannot prevent all mechanical failures.
 23 Q. So you try to minimize the amount of damage; is
 24 that correct?
 25 A. Yes.

30

1 Q. Do you know whether Marathon has an environmental
 2 policy concerning pollution of groundwater?
 3 A. No, I do not.
 4 Q. Who would I talk to to see if Marathon has a
 5 policy concerning pollution of groundwater?
 6 A. The environmental and safety group.
 7 Q. Based upon your experience in the oil industry,
 8 can you tell me whether oil and gas exploration and
 9 production can cause pollution to groundwater?
 10 A. Yes.
 11 Q. How can oil and gas exploration and production
 12 cause pollution to groundwater?
 13 A. Through underground blowouts.
 14 Q. Anything else?
 15 A. Leaks in buried flow lines.
 16 Q. I'm sorry, in --
 17 A. Buried flow lines.
 18 Q. Buried flow lines. Okay.
 19 Anything else?
 20 A. Not that I can think of now.
 21 Q. What's an underground blowout?
 22 A. Where you would have flow from a higher pressured
 23 zone to a lowered pressured zone.
 24 Q. When we talked earlier about Saltwater Disposal
 25 No. 1, with water flowing to the surface as a result

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1 of problems with the casing or cement around the
 2 casing, would that be characterized as underground
 3 blowout?
 4 A. No.
 5 Q. Why not?
 6 A. If the lowest pressure interval is at the
 7 surface, it will flow to the surface rather than into
 8 a lower pressured zone that is still underground.
 9 Q. I guess I'm a little bit confused by that.
 10 A. I would say an underground blowout is a higher
 11 pressured zone to a lowered pressure zone but still
 12 under the surface.
 13 Q. I see. So it does not reach the surface, then?
 14 A. Correct.
 15 Q. Okay. Is it possible, from your experience, for
 16 groundwater to be polluted as a result of the type of
 17 leak that we discussed earlier with the Saltwater
 18 Disposal Unit No. 1?
 19 A. I'm not sure.
 20 Q. Okay. You're not sure because of your expertise
 21 or --
 22 A. I have, from the information I have seen, I have
 23 no way of knowing whether that -- what that water was
 24 or if any of the water was going into the groundwater
 25 drinking zone.

32

1 Q. Okay. From this particular well, we don't know
 2 that?
 3 A. No. That's correct.
 4 Q. Okay. But water flowing from a lower zone to a
 5 higher zone, say, to the surface, if that water is
 6 contaminated, do you know whether it's possible for
 7 that to pollute the water above it, assuming the water
 8 is above it?
 9 A. It's possible.
 10 Q. Okay. The second item that you've talked about
 11 was leaks in buried flow lines; is that correct?
 12 A. Yes.
 13 Q. What is a buried flow line?
 14 A. A flow line would be a piece of pipe that's
 15 transporting fluid from one spot to another, and if
 16 it's underground.
 17 (Messrs. Billstein, Heffernan, and Sorenson left
 18 the conference room.)
 19 BY MR. GALLIK:
 20 Q. Okay. With respect to the oil and gas wells and
 21 saltwater disposal wells that we're talking about in
 22 northeastern Montana, Marathon's wells, were there any
 23 buried flow lines associated with any of those wells?
 24 A. Yes, there were.
 25 Q. Okay. For which wells, if you know?

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1 A. From the Buckles A-1 well to the treater, and
2 from the treater to the saltwater disposal well.
3 Q. Okay. Do oil companies, during the course of the
4 production of these wells, maintain records on the
5 buried flow lines to see if there are any leaks?
6 A. Sometimes.
7 Q. Were there any records associated with buried
8 flow lines in this that you were able to see?
9 A. There was one record that indicated they replaced
10 the flow lines with fiberglass.
11 Q. Okay. But in terms of, and I'll talk about that
12 in a second here, in terms of the records that you
13 reviewed, was there any record of any leaks with the
14 existing buried flow line before they replaced it with
15 fiberglass?
16 A. There were mention of leaks, but no documents
17 that I could find that indicated how many leaks --
18 Q. Okay.
19 A. -- or when they occurred.
20 Q. Okay. What travels through that buried flow
21 line?
22 A. The wells that are produced from the production
23 well, from the Buckles A-1 well.
24 Q. So that would be hydrocarbons? Is that a fair
25 use of the word?

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1 A. Yes.
2 Q. Oil?
3 A. Oil and water.
4 Q. Oil or water?
5 A. Whatever fluid is produced from the Buckles A-1
6 would have flowed through those lines.
7 Q. Okay. And how deep, if you know, was the buried
8 flow lines with respect to the Buckles well?
9 A. I did not see anything that indicated how deep
10 they were.
11 Q. From your experience, is there a range at which
12 flow lines are typically buried?
13 A. In my experience, 4 to 5 feet deep.
14 Q. You indicated that you saw a record that showed
15 that the flow line was replaced with a fiberglass
16 line. What was originally the composition of the pipe
17 that was replaced, if you know?
18 A. Steel.
19 Q. Steel?
20 A. Um-hmm.
21 Q. Okay. And do you know why it was replaced with a
22 fiberglass line?
23 A. The document indicated that it was being replaced
24 due to numerous leaks.
25 Q. From your experience in the industry, is

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1 fiberglass a better material to use for preventing
2 leaks than steel?
3 A. It is more corrosion resistant.
4 Q. Okay. From your experience, if you're able to
5 tell me, when you have a pipe that's buried, let's
6 say, 4 to 5 feet under the ground made of steel and
7 it's leaking, how do you know that it's leaking?
8 A. The fluid that is leaking will bubble to the
9 surface.
10 Q. So being buried 4 to 5 feet under the ground, to
11 bubble to the surface would indicate to me a
12 significant amount of water? We're not talking about
13 pinholes here, are we?
14 A. I have seen pinhole leaks, yes.
15 Q. That bubble to the surface?
16 A. Yes.
17 Q. Would that be because over time it just gets
18 saturated and flows to the surface?
19 A. I guess I am not sure what you mean by
20 "significant."
21 Q. That's fair. But in any event, in order to tell
22 whether a flow line is leaking is by visual
23 observation from above the ground? A pool of water;
24 would that be fair?
25 A. Ground that is moister than surrounding area.

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1 Q. And then in order to check for the leak, I take
2 it you dig up the ground and look at the pipe?
3 A. Yes.
4 Q. Is it possible, from your experience in the
5 industry, to conduct oil and gas production or
6 exploration without causing pollution to underground
7 aquifers?
8 A. Definitely, yes.
9 Q. Okay. These wells were drilled back in the early
10 1980s; is that correct?
11 A. 1981.
12 Q. And you were in the oil industry at that time?
13 A. Yes, I was.
14 Q. Okay. Was it possible back in 1981 in the oil
15 industry to conduct oil and gas exploration and
16 production without causing contamination to
17 underground aquifers?
18 A. Yes.
19 MR. GALLIK: I need to take a break.
20 (Recess taken from 09:53:23 to 10:00:46.)
21 BY MR. GALLIK:
22 Q. Earlier in the deposition we talked about
23 conducting oil operations in a good and workmanlike
24 manner. Is that a standard phrase in the industry
25 that you're aware of?

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1 A. I have not heard it.
 2 Q. Okay. If a person conducts themselves -- let me
 3 strike that.
 4 How about the term "prudent operator" of an oil
 5 well? Do you know what a prudent operator of an oil
 6 or gas production well is?
 7 A. I would describe "prudent" as following the
 8 environmental and safety regulations and conducting
 9 your operations in a manner to minimize or eliminate
 10 any pollution.
 11 Q. Okay. From your experience in the industry,
 12 taking your definition of "prudent operator," would a
 13 prudent operator know that its oil exploration or
 14 production activities have the capability of causing
 15 groundwater contamination?
 16 MR. MURPHY: I object to the question as
 17 being vague and ambiguous and involving too many
 18 variables. Go ahead, if you can answer.
 19 THE DEPONENT: Would you repeat it, please?
 20 BY MR. GALLIK:
 21 Q. Sure. Using your definition of "prudent
 22 operator" -- can we just assume that for the next
 23 series of questions? Whenever I use the words
 24 "prudent operator," I will just use your definition
 25 you've given us, okay?

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1 A. (No response.)
 2 Q. Would a prudent operator of an oil production
 3 well know that its operations have the capability of
 4 causing groundwater pollution?
 5 MR. MURPHY: Same objection. Go ahead.
 6 THE DEPONENT: I guess I would say the
 7 potential exists, but you would not always know if the
 8 pollution was occurring.
 9 BY MR. GALLIK:
 10 Q. No, I understand that, but going in to drill a
 11 well or operate a well, the prudent operator would
 12 know that that potential exists, to cause groundwater
 13 pollution?
 14 A. Yes.
 15 Q. Okay. And the same would be true of a saltwater
 16 disposal well? The prudent operator would know that
 17 that well has the potential of causing groundwater
 18 pollution?
 19 A. You attempt to take the precautions to prevent
 20 that from happening.
 21 Q. No, and I understand. That's fair.
 22 A. (Nodded head affirmatively.)
 23 Q. But going into and operating the well, you know
 24 the potential exists to cause pollution?
 25 A. Yes.

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1 Q. Okay. And as you, I believe, just testified, the
 2 prudent operator strives to keep its operations from
 3 causing pollution, correct?
 4 A. Yes.
 5 Q. From your experience, if you're able to tell me,
 6 how would a prudent operator take steps to make
 7 sure -- or minimize the possibility of its wells
 8 causing groundwater pollution?
 9 MR. MURPHY: Same objection. Go ahead.
 10 THE DEPONENT: By daily monitoring to check
 11 for leaks.
 12 BY MR. GALLIK:
 13 Q. How does an oil drilling operator check for leaks
 14 on a daily basis?
 15 A. By visual inspection.
 16 Q. Are all leaks capable of being seen through
 17 visual inspection?
 18 A. I don't know.
 19 Q. Do you know who would be the person best suited
 20 to answer that question?
 21 A. No, I don't.
 22 Q. So from your experience, a visual inspection of
 23 the oil well would tell you if you have a leak?
 24 A. The visual inspection of the flow line
 25 right-of-way will tell you if you have a leak in the

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1 flow line.
 2 Q. Okay. So that's one component of the well,
 3 correct, the flow line?
 4 A. It's part of the well operation.
 5 Q. Yes. Let's say you have a leak in the casing
 6 underground, in the cement casing. How does an oil
 7 company check for leaks with respect to that casing?
 8 A. We periodically do pressure tests.
 9 Q. Okay. And can you explain to me what a pressure
 10 test is?
 11 A. We would apply pressure at the surface and then
 12 shut it in to see if that pressure is maintained.
 13 Q. So if it holds, there's no leaks?
 14 A. Correct.
 15 Q. And if it's losing pressure, there is a problem?
 16 A. Yes.
 17 Q. From your review of the records in this
 18 particular case, did the saltwater disposal well have
 19 any pressure tests performed?
 20 A. It had one performed when it was originally
 21 completed.
 22 Q. And do you recall the results of that pressure
 23 test?
 24 A. The pressure test held.
 25 Q. Okay. From your experience working with

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1 Marathon, how often does Marathon suggest that
2 pressure tests be conducted on production facilities?
3 A. It depends if it's a producing well or an
4 injection well.
5 Q. Let's talk first about injection wells. What is
6 Marathon's policy with respect to pressure testing
7 injection wells?
8 A. It's a federally regulated policy. You test it
9 every five years, I believe.
10 Q. Every five years?
11 A. Yes.
12 Q. Is the federal regulation a minimal policy or is
13 that just the policy?
14 A. That's the policy.
15 Q. All right. And Marathon does not, as a policy,
16 go beyond the every-five-year testing, to your
17 knowledge?
18 A. If we suspect there is a problem, we will test
19 them more frequently.
20 Q. Okay. When you indicated that, if you suspect
21 that there's a problem with an injection well, you'll
22 do a pressure test prior to the expiration of the
23 five-year period –
24 A. Yes.
25 Q. – what sort of indicators are there that you may

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1 have a problem?
2 A. If the pressure on your annular area is the same
3 as the tubing pressure, that would indicate a
4 potential problem.
5 Q. Okay. And the annular area is what, now?
6 A. Between the tubing and the casing.
7 Q. Okay. And how – again, I'm not an oil well
8 operator. – how does one know that there's a potential
9 problem with that pressure out there?
10 A. If the pressures were the same, it could be a
11 problem. Generally there is no pressure on the
12 annular area.
13 Q. When we're talking about the annular area, we
14 have the well casing, and we're talking about the
15 outside of the well casing?
16 A. No, inside the well casing.
17 Q. Okay. But pressure, for me anyway, is something
18 that I can't see or have any way of visually
19 observing. Just so I'm clear on how you can suspect
20 that there's a pressure problem there, how does an oil
21 well operator get that hint?
22 A. We have pressure gauges.
23 Q. On-site?
24 A. On the annular area.
25 Q. Any other potential reasons for conducting a

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1 pressure test prior to the expiration of five years?
2 A. If we had worked on the well, we will do a
3 pressure test to make sure that we have well bore
4 integrity before we return it to injection.
5 Q. Okay. So when you say you work on the well, it
6 could be for a number of reasons?
7 A. Yes.
8 Q. From your review of the records in this
9 particular case, the saltwater disposal well, I take
10 it, was tested only one time, from your review of the
11 records?
12 A. Yes.
13 Q. And this well, as I understand it, was in
14 operation for about three years?
15 A. Yes.
16 Q. From your review of the records – well, first of
17 all, were there any records concerning the annular
18 pressure?
19 A. Not that I am aware of.
20 Q. Is it common for Marathon to keep those types of
21 records?
22 A. Yes.
23 Q. Okay. Is that something you would have expected
24 to see in the documents that you reviewed?
25 A. I don't know what the requirements were 20 years

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1 ago.
2 Q. Okay. How long, to your knowledge, has – strike
3 that.
4 Is there a requirement now that you keep those
5 types of records?
6 A. Yes.
7 Q. Okay. And do you know when that requirement went
8 into effect?
9 A. No, I do not.
10 Q. Okay. Aside from the annular pressure issue that
11 we just talked about, any other indications to an oil
12 well company or operator that there might be some
13 problems with subsurface leaking?
14 A. Not that I can think of.
15 Q. Okay. You mentioned earlier about water coming
16 to the surface in this particular saltwater well.
17 A. (Nodded head affirmatively.)
18 Q. That would be evidence of problem, correct?
19 A. Yes.
20 Q. Okay. Are you familiar with the steps that an
21 oil company must take prior to spudding the well; for
22 example, acquiring the lease and the land and getting
23 the necessary permits?
24 A. Very generally.
25 Q. Okay. Just very generally, maybe you could

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1 explain that to me.
2 A. After the lease is acquired, before a well can be
3 drilled, a permit has to be submitted to the
4 regulatory agencies with a plan for drilling the well.
5 Q. Okay. So I take it the ground is leased from the
6 landowner, whoever that may be.
7 A. (Nodded head affirmatively.)
8 Q. And the oil company then gets a permit to drill
9 from the regulatory agencies, correct?
10 A. Um-hmm.
11 Q. With respect to oil and gas exploration, is it
12 fair to say that that's both the state and federal
13 government?
14 A. Yes.
15 Q. Okay. With respect to oil and gas operations on
16 Indian reservations, do you know, are there any
17 requirements of obtaining any tribal approval?
18 A. I don't know.
19 Q. And once you get the approval from the regulatory
20 agencies, I take it then you enter into a contract
21 with the driller, correct?
22 A. Yes.
23 Q. Okay. And Exhibit 52 was a drilling contract
24 that we discussed earlier, correct?
25 A. Yes.

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1 Q. Okay. Of all of the people in the agencies that
2 we've just talked about, from your experience, whose
3 responsibility is it to make sure that the oil and gas
4 operations do not cause groundwater pollution?
5 A. I'm not sure.
6 Q. Okay. Is the landowner responsible for making
7 sure that the groundwater is not polluted?
8 A. I'm not sure on that.
9 Q. You don't know?
10 A. I don't know.
11 Q. Who would know?
12 A. The drilling department is responsible for the
13 drilling through that phase of the operation.
14 Q. So they could tell me who should be responsible
15 for making sure pollution doesn't occur?
16 A. Yes.
17 Q. From your experience, you would agree with me
18 that if an oil company conducts its production
19 activities in a prudent manner, then groundwater
20 should not become contaminated with pollution?
21 MR. MURPHY: Objection. Calls for legal
22 conclusion. Go ahead, if you can answer it.
23 THE DEPONENT: Would you repeat that again?
24 BY MR. GALLIK:
25 Q. Sure. You would agree with me that if an oil

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1 company – strike that.
2 Again using your prior definition of "prudent
3 operator," if an oil company conducts its business –
4 strike that.
5 If an oil company conducts its well operations in
6 a prudent manner, the groundwater should not become
7 contaminated with pollution?
8 MR. MURPHY: Object. Same objection. Also
9 vague and ambiguous and depends on too many variables.
10 Go ahead.
11 THE DEPONENT: If they conduct their
12 operations in a prudent manner, groundwater
13 contamination should not occur.
14 BY MR. GALLIK:
15 Q. And it's fair to say that Marathon attempts to
16 conduct its operation so as to not cause pollution to
17 groundwater, true?
18 A. Yes.
19 (Exhibit 53 was marked for identification.)
20 BY MR. GALLIK:
21 Q. I'm handing you what's marked Exhibit 53, which
22 is the answer of Marathon Oil Company to plaintiffs'
23 seventh amended complaint and demand for jury trial.
24 Turning your attention to page 8, paragraph 51, I ask
25 if you could review that for yourself.

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1 (Pause.)
2 BY MR. GALLIK:
3 Q. Have you seen that document before, the answer to
4 the complaint?
5 A. No, I don't believe I have.
6 Q. Okay. Paragraph 51 states that the plaintiffs
7 voluntarily assumed the risk of events, occurrence and
8 damages alleged in the complaint. Can you tell me the
9 factual basis for the assertion that the plaintiffs
10 assumed the risk that their groundwater would be
11 contaminated?
12 A. No, I cannot.
13 Q. Okay. Earlier you, I believe, testified about
14 cleanup policies, or that you're familiar with cleanup
15 policies. One of the policies is to clean up spills
16 for Marathon; is that correct?
17 A. Yes.
18 Q. If a landowner's groundwater is polluted by
19 Marathon's operations, what action can the landowner
20 expect that Marathon would take to remedy that
21 situation?
22 A. That is a decision that will be made by upper
23 management. That is not my decision to be made.
24 Q. Okay. So you don't know?
25 A. I don't.

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1 Q. Okay. So you can't tell me, if Marathon's
2 operations cause pollution, whether the policy is to
3 clean that up?
4 A. Marathon's policy is to clean up pollution, but I
5 cannot tell you what management's -- what actions they
6 would take.
7 Q. In a specific instance?
8 A. Yes.
9 Q. So it's fair to say that their general policy
10 would be to clean up the pollution?
11 A. Yes.
12 Q. That's a reasonable policy; wouldn't you agree?
13 A. Yes.
14 Q. If an oil and gas operation causes groundwater
15 pollution, do you know whose responsibility it is to
16 make that determination?
17 A. No, I do not.
18 Q. Is the landowner responsible for making that
19 determination?
20 A. I don't know.
21 Q. How about the oil company?
22 A. I don't know.
23 Q. Does Marathon, aside from Marathon's general
24 policy of cleaning up the pollution that it causes --
25 fair so far?

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1 A. Yes.
2 Q. Does Marathon have a specific policy for cleaning
3 up spills of oil or saltwater that impact the surface
4 of the earth?
5 A. We are to clean those up as soon as possible.
6 Q. With respect to -- was it an intake line that we
7 were talking about before that was replaced with
8 fiberglass, do you recall?
9 A. The flow line.
10 Q. The flow line. Thank you.
11 Have you had any experience with cleaning up
12 leaks of flow lines?
13 A. Very minimal.
14 Q. Okay. Based upon your minimal experience, how
15 does one clean up a fuel line, flow line leak?
16 A. We will remove the contaminated soil and repair
17 the leak.
18 Q. Okay. And the amount of soil removed, I take it,
19 is dependent upon the magnitude of the leak itself?
20 A. Yes.
21 Q. Okay. Anything else aside from removing the soil
22 and fixing the leak?
23 A. We will take precautions to look at the situation
24 and prevent further leaks if there's evidence that
25 further could occur at that time.

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1 Q. For example, if a steel line is corroding, you
2 would replace it, correct?
3 A. Yes.
4 Q. With respect to oil and gas operation,
5 production, is it common for those activities to be
6 taking place in the vicinity of underground water?
7 A. They can take place where there is underground
8 water. I struggle with "common."
9 Q. From your experience, though, it is not uncommon
10 for oil exploration and production activities to take
11 place where there are underground aquifers of water?
12 A. That's correct.
13 Q. What investigation does Marathon do in the course
14 of its business to locate freshwater aquifers prior to
15 conducting any drilling or production activities?
16 A. I'm not familiar with that.
17 Q. Okay.
18 A. The fields I work in were discovered years ago,
19 so we don't deal with that.
20 Q. I'm sorry. I didn't --
21 A. I work on older fields, so those issues were
22 determined years ago, and I am not familiar with the
23 process for a new field.
24 Q. Okay. So just so I understand, in your position
25 with Marathon, it's not been your work experience to

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1 come into new fields where the issue of locating
2 freshwater is a possibility?
3 A. Yes.
4 Q. By the time you come into the picture, all that
5 work had been done, correct --
6 A. Yes.
7 Q. -- and you're dealing with an existing operation?
8 A. Yes.
9 Q. Okay. So you don't know what Marathon's policy
10 is with respect to locating underground water?
11 A. No.
12 Q. Do you know, does Marathon currently have any oil
13 and gas leases in the East Poplar Oil Field?
14 A. I don't know.
15 Q. And who would know the answer to that?
16 A. Someone in our land department.
17 Q. Okay. Do you know, just out of curiosity, how
18 many employees Marathon has? Thousands?
19 A. In which location? I'm not sure what the numbers
20 are now.
21 Q. Okay. Just in terms of the oil and gas part of
22 Marathon -- is that all that Marathon does, is oil and
23 gas ventures?
24 A. We have a joint venture with some refining and
25 marketing.

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1 Q. Okay. In terms of the oil and gas part of
2 Marathon, is there like – you talk about there's a
3 land department.
4 A. Yes.
5 Q. And they're responsible for what type of things?
6 A. Leasing issues.
7 Q. Acquiring the property on which to do oil
8 exploration?
9 A. Yes.
10 Q. Do you have an environmental department?
11 A. Yes, we do.
12 Q. Okay. And what's the purpose of the
13 environmental department, if you know?
14 A. To provide assistance to the field operations,
15 the drilling department, on environmental and safety
16 issues.
17 Q. Okay. Are they responsible for keeping up to
18 date with various regulatory requirements?
19 A. Yes.
20 Q. The latest technologies, for example, in how to
21 prevent pollution?
22 A. Yes.
23 Q. And then they pass that information on to the
24 people who are on the ground?
25 A. Yes.

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1 Q. Does the environmental department conduct the
2 inspections of existing operations?
3 A. We have field representatives, yes.
4 Q. Okay. And do you interact with the field
5 representatives as part of your job?
6 A. Yes.
7 Q. Okay. So in terms of environmental policies of
8 Marathon, that group of people would be the people I
9 should turn to to talk about some of these policies?
10 A. Yes.
11 Q. Do you know what freshwater aquifers are located
12 below the Marathon wells located in the East Poplar
13 Oil Field?
14 A. No, I do not.
15 Q. Okay. Do you know whether any of the landowners
16 or people who lease land in the East Poplar Oil Field
17 depend upon freshwater out of the East Poplar Oil
18 Field for drinking?
19 A. I don't know that.
20 Q. Okay. Have you ever been to the East Poplar Oil
21 Field?
22 A. No, I have not. But I plan – that's one of the
23 things that I've been told I will do, is make a trip.
24 Q. Does Marathon have any operations on lands
25 belonging to Native Americans anywhere else in the

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1 United States that you're aware of?
2 A. We have some in Wyoming.
3 Q. Wyoming?
4 A. Um-hmm.
5 Q. Which tribe is that, if you know?
6 A. Shoshone Arapahoe, I believe.
7 Q. And you're aware, I take it, that the area near
8 the East Poplar Oil Field is to be considered as part
9 of the Fort Peck Indian Reservation?
10 A. Yes.
11 Q. Do you know which regulatory agencies have any
12 sort of jurisdiction over the East Poplar Oil Field
13 with respect to oil and gas operations?
14 A. I believe the EPA.
15 Q. Okay.
16 A. Also, the Montana Oil and Gas Commission and the
17 BLM.
18 Q. Are you familiar with any of the rules and
19 regulations governing oil production activities in
20 general?
21 A. Broad question.
22 Q. Right.
23 A. Some of the rules and regulations.
24 Q. Okay. Are you aware of any rules or regulations
25 that allow oil companies to pollute groundwater?

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1 A. No.
2 Q. How does Marathon educate its employees
3 concerning the proper adherence to the rules and
4 regulations of the state and local agencies that we've
5 just talked about?
6 A. We have periodic training sessions. We are also
7 provided written documents with some of those rules by
8 the environmental and safety department, their
9 representatives in each main field area, as well as
10 people located in the main office.
11 Q. Where is the main office, by the way?
12 A. Houston.
13 Q. Okay. You have various branch offices throughout
14 the country?
15 A. Yes, we do.
16 Q. One of which is in Cody?
17 A. Yes.
18 Q. How does Marathon determine or confirm that its
19 operations are complying with the various rules and
20 regulations of the agencies?
21 A. We have periodic reporting requirements and a
22 good faith effort, basically.
23 Q. The reporting requirements that you talk about,
24 are those from the people in the field higher up the
25 corporation, or are you talking about the corporation

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1 giving reports to the agencies?
 2 A. Both.
 3 Q. Okay. What are the people in the field supposed
 4 to do with respect to advising the company higherups
 5 of what it is they're doing?
 6 A. Pertaining to what, specifically?
 7 Q. That's a good question. Complying with the rules
 8 and regulations regarding environmental protection.
 9 A. They are the ones that will prepare or submit the
 10 information that is included in the reports.
 11 Q. Okay. The environmental department of Marathon,
 12 is that located in Houston, or are there branch
 13 offices for that as well?
 14 A. Branch offices.
 15 Q. So there's one in Cody, Wyoming as well?
 16 A. Yes.
 17 Q. Who is the person in charge of the Cody division
 18 of the environmental section?
 19 A. Stephanie Olson.
 20 Q. Stephanie –
 21 A. Olson.
 22 Q. – Olson.
 23 Does Marathon ever perform environmental audits
 24 on any of its field operations?
 25 A. Yes, they do.

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1 Q. And how often do they do that, if you know?
 2 A. I don't know.
 3 Q. Okay. Do you know what the environmental audit
 4 consists of?
 5 A. I'm not sure.
 6 Q. Something I should ask Stephanie?
 7 A. Yes.
 8 Q. Has Marathon ever conducted, in the normal course
 9 of its business, to your knowledge, an environmental
 10 audit of the three wells it has in the East Poplar Oil
 11 Field?
 12 A. Not to my knowledge.
 13 Q. We talked earlier about Marathon's policies with
 14 respect to spills and that being that you clean it up
 15 as quickly as you can, correct?
 16 A. (Nodded head affirmatively.)
 17 Q. Is there any reporting requirement that also
 18 accompanies the cleanup?
 19 A. The reporting requirements are based on the
 20 volume of the spill, or estimated volume.
 21 Q. How much water or petroleum product needs to hit
 22 the ground before a report is required, if you know?
 23 A. I believe if it's less than 10 barrels, no report
 24 is required.
 25 Q. What's the size of a barrel in gallons?

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1 A. 42 gallons.
 2 Q. And when a report – let's say you spill
 3 43 gallons or more. What type of documentation is
 4 generated to report that spill?
 5 A. It would be 420 gallons, 10 barrels.
 6 If it's between 10 and 100 barrels, a written
 7 report is required.
 8 Q. Okay. If it's more than 100 barrels?
 9 A. Oral notification is required, as well as a
 10 written report.
 11 Q. And these written reports are then submitted to
 12 whom?
 13 A. The regulatory agency responsible for the
 14 location where the spill occurred.
 15 Q. Does an oil company face penalties or fines if
 16 they spill a certain amount of water or oil on the
 17 ground?
 18 A. I'm not sure.
 19 Q. Do you know whether Marathon has ever been fined?
 20 A. Yes, I believe they have.
 21 Q. The written report that's submitted for 10 to
 22 100 barrels, is that different than a written report
 23 for 100-plus barrels, or are they the same report?
 24 A. I'm not sure.
 25 Q. Is that a written report that's a form report

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1 from the government to the oil companies saying, "If
 2 this happens, you fill this out and submit it," or do
 3 you just have your own protocol?
 4 A. I'm not sure where the form is generated.
 5 Q. Okay. Based upon your experience, does an oil
 6 company have to submit, as part of an operating plan,
 7 a cleanup plan in case there is a spill?
 8 A. I don't know.
 9 Q. Okay. Do you know how many barrels of oil were
 10 produced from the properties that Marathon has in the
 11 East Poplar Oil Field?
 12 A. Cumulative production was less than
 13 9,000 barrels.
 14 Q. Okay. And this is from the two wells, I take it?
 15 A. Yes.
 16 Q. Okay. Any cubic feet of gas produced from those
 17 wells?
 18 A. Not that I have seen documented.
 19 Q. Okay. Do you know how many barrels of saltwater
 20 were produced from those wells?
 21 A. About 460,000 barrels were disposed of.
 22 Q. Now the use of the word "disposed" is obviously
 23 different than that produced. Is it possible for some
 24 water that's produced to not be disposed of in the
 25 well?

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1 A. If it was produced to the surface, it was either
2 injected into the disposal well or transported off the
3 location.
4 Q. Okay. Is there any evidence in the records that
5 you've seen that any of this water was transported
6 off?
7 A. No.
8 Q. So when you say 460,000 barrels were disposed of,
9 it would be fair to conclude there was 460,000 barrels
10 injected into the ground?
11 A. Yes.
12 Q. Okay. Do you know whether that saltwater well
13 was used by other oil companies to dispose of their
14 production water?
15 A. I don't.
16 Q. From your experience, is that a record that is
17 commonly kept by an oil company if it is disposing of
18 another company's water?
19 A. I don't know.
20 Q. From your experience, do you know whether oil
21 companies with saltwater disposal wells will, at
22 times, accept water from other companies and inject it
23 into the ground for them?
24 A. Yes.
25 Q. Okay. When an oil company injects water for

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1 another company, is that company paid money to inject
2 that water?
3 A. Usually, yes.
4 Q. Okay. Do you know what the standard rate of
5 compensation is for one company to inject another
6 company's waste water?
7 A. No, I don't.
8 Q. So I'm clear on this, you saw no documentation in
9 this file that there was ever any water disposed of
10 for another company?
11 A. That's correct.
12 Q. Okay. Is freshwater sometimes injected into the
13 aquifers as well?
14 A. I don't know.
15 Q. Okay. Do you know whether any water from fresh
16 wells, freshwater wells was ever used in connection
17 with these particular wells in the East Poplar Oil
18 Field?
19 A. During some of the early drilling work.
20 Q. Okay. And do you know what the source of that
21 freshwater was?
22 A. The documentation in the file indicated it was
23 from the city of Plentywood.
24 Q. Okay. What's the purpose of that freshwater, if
25 you know, during the early production activities?

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1 A. It would have been used to mix the drilling mud.
2 Q. Create a slurry?
3 A. Yes.
4 Q. Do you know whether any freshwater wells have
5 ever existed on the properties that Texas Oil & Gas
6 leased?
7 A. I don't know.
8 Q. Other than the plaintiffs in this particular
9 litigation, has Marathon ever received complaints from
10 other people or entities concerning groundwater
11 quality in the general area of its operations in the
12 East Poplar Oil Field?
13 A. Not that I am aware of.
14 Q. In your review of the file, did it indicate that
15 Texas Oil & Gas, who was operating it at the time,
16 that they ever received any complaints, to your
17 knowledge?
18 A. No.
19 Q. Has Marathon ever received any written or oral
20 complaints from any regulatory agency about its East
21 Poplar Oil Field operation?
22 A. Not that I am aware of.
23 Q. How about the EPA, the Environmental Protection
24 Agency? Are you aware of the administrative order
25 concerning these particular wells?

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1 A. I have not seen that.
2 Q. Are you aware that there is an administrative
3 order in effect with respect to the East Poplar Oil
4 Field handed down by the Region 8 office of the
5 Environmental Protection Agency?
6 A. Just the very basic, that it's there.
7 Q. Okay. Do you know whether Marathon is a party to
8 the appeal of that order?
9 A. I don't know that.
10 Q. Okay. Do you know whether Marathon has supplied
11 any documents to the EPA that have not been produced
12 to the plaintiffs in this action?
13 A. I don't know.
14 Q. Okay. So in terms of your record review, you
15 reviewed the well files from Texas Oil & Gas?
16 A. Yes.
17 Q. Anything else?
18 A. No.
19 Q. Have you seen a copy of the USGS report that was
20 proposed by Joanna Thamke and another person in this
21 case?
22 A. No, I have not.
23 Q. So I take it if you haven't seen it, you haven't
24 read it?
25 A. That's correct.

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1 Q. You also could not tell me when Marathon first
2 received a copy of that report?
3 A. No.
4 Q. Can you tell me whether Marathon provided any
5 information to Ms. Thamke or the USGS with respect to
6 the preparation of that report?
7 A. I don't know.
8 Q. Has anyone from the USGS ever asked you any
9 questions about Marathon's activities or Texas Oil &
10 Gas's activities in the East Poplar Oil Field?
11 A. No.
12 Q. You're aware, of course, that the reason you're
13 here is because some people who live in the area have
14 complained about the groundwater in the area, correct?
15 A. Yes.
16 Q. When did you first become aware of complaints by
17 landowners about the drinking water?
18 A. About a year ago.
19 Q. Okay. Do you know when Marathon first became
20 aware of those complaints?
21 A. No, I don't.
22 Q. Okay. How has Marathon, in the normal course of
23 its business, responded to those complaints?
24 A. A little over a year ago when I first heard about
25 this, I was asked to review the files.

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1 Q. And the files would be the same you've identified
2 earlier today?
3 A. Yes.
4 Q. Okay. Aside from reviewing the file, what else
5 has Marathon done to respond to the complaints?
6 A. I don't know.
7 Q. Okay. Do you know whether Marathon has conducted
8 any sort of investigation into the source of the
9 pollution in the groundwater?
10 A. No, I do not.
11 Q. Are you aware that the EPA, one part of the EPA
12 order required that drinking water be provided to the
13 plaintiffs in general?
14 A. I'm aware of that, yes.
15 Q. Okay. Do you know how much water is being
16 delivered to the plaintiffs?
17 A. No.
18 Q. Okay. Do you know who's participating in the
19 delivery of the water to the plaintiffs?
20 A. No.
21 Q. Do you know how much Marathon has spent in the
22 delivery of water to the plaintiffs?
23 A. No.
24 Q. Has Marathon, to your knowledge, investigated the
25 possibility of cleaning up the aquifer?

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1 A. No.
2 Q. You don't know whether they have or they haven't?
3 A. I don't know --
4 Q. Okay.
5 A. -- if they have.
6 Q. Do you know if Marathon has investigated any ways
7 of providing alternative drinking water to the
8 plaintiffs?
9 A. I don't know.
10 Q. Do you know whether Marathon has had any
11 participation or input into a possible pipeline to
12 provide water to the plaintiffs?
13 A. I don't know.
14 Q. Do you know, does Marathon have a document
15 retention policy?
16 A. Yes, they do.
17 Q. And what is that policy?
18 A. I don't remember off the top of my head.
19 Q. Okay. Is it on a piece of paper that's been
20 retained by the company?
21 A. It's on -- yes.
22 Q. Where would I get a copy of that, if you know?
23 A. The legal department could provide you one.
24 (Discussion off the record.)
25 ///

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1 BY MR. GALLIK:
2 Q. I'd like to turn your attention now into the
3 investigation, if any, that Marathon has conducted
4 into the pollution that we're talking about in Poplar.
5 What investigation has Marathon performed, if any, to
6 determine if the groundwater in the East Poplar Oil
7 Field is, in fact, polluted?
8 A. I don't know of any.
9 Q. Is the aquifer polluted?
10 A. I don't know.
11 Q. How would you determine if the aquifer was
12 polluted?
13 A. Water sampling; comparison, current compared to
14 prior to any disposal into the zone.
15 Q. Your answer, Marathon's answer to the complaint
16 states for certain that it had no responsibility for
17 the contamination of the water. Do you know the
18 factual basis for that statement?
19 A. I cannot speak for what Marathon representatives,
20 their basis for that comment.
21 Q. So you're not --
22 A. My review of the files has indicated nothing that
23 would indicate we did contribute to that or to any
24 groundwater contamination.
25 Q. Okay. So the leak that was going on for five

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1 days, from your review, would not contribute to any
 2 pollution?
 3 A. I don't know. I did not see anything that
 4 indicated that it was going into the groundwater
 5 aquifer as opposed to coming to the surface.
 6 Q. Okay. And in order to make the determination
 7 that it was or was not going into the aquifer, what
 8 sort of analysis did you do?
 9 A. I did not do any analysis. No water sampling was
 10 done of the water that was coming to the surface to
 11 determine if it was saltwater, freshwater, or what
 12 type of water it was.
 13 Q. Okay. So you're not sure whether it was
 14 saltwater or freshwater?
 15 A. That's correct.
 16 Q. Okay. And you don't know whether it managed to
 17 go into any zones before it reached the surface?
 18 A. I don't know.
 19 Q. Okay. All you know is that water came to the
 20 surface?
 21 A. Yes.
 22 Q. How is a landowner supposed to know whether or
 23 not his groundwater is contaminated by the oil
 24 production activities of an oil company?
 25 A. I don't know.

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1 Q. In Marathon's answer to the complaint, one of the
 2 affirmative defenses is that the plaintiffs' damages,
 3 if any, were caused by persons or entities other than
 4 Marathon. Has Marathon identified those entities or
 5 persons that are responsible for the groundwater
 6 contamination?
 7 A. Not that I am aware.
 8 Q. Marathon just knows that it wasn't it; is that
 9 right?
 10 A. I see nothing in the files to indicate that we
 11 contributed.
 12 Q. What would you look for in a file to see if there
 13 has been contribution to a contamination of the
 14 aquifer?
 15 A. Casing leaks in the area of the aquifer.
 16 Q. Okay. Anything else?
 17 A. Any visible evidence at the surface after the
 18 wells were reclaimed or plugged and abandoned, if
 19 there was continued seepage or leaking.
 20 Q. Anything else?
 21 A. Not that I can think of.
 22 Q. So it's your testimony, I take it, then, that
 23 casing leaking in an area of the groundwater aquifer
 24 is a common source of pollution in oil production
 25 activities?

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1 A. I don't believe it's a common source. It's a
 2 potential source.
 3 Q. Okay. That's fair.
 4 In terms of sources of contamination of a
 5 groundwater aquifer from the oil exploration activity,
 6 among sources of pollution, a casing leak would be one
 7 that you would look to?
 8 A. Yes.
 9 Q. Okay. And by "common," I mean in terms of
 10 problems that oil companies have with underground
 11 drilling. Leaks of pipes are among the problems or
 12 would be among the ones you would look for?
 13 A. Would be one, yes.
 14 Q. Now earlier on with the saltwater disposal well
 15 we were talking about, was that a casing leak?
 16 A. No.
 17 Q. And the problem there was that there wasn't
 18 sufficient cement on the outside of the casing –
 19 A. Yes.
 20 Q. – to prevent the water from going up; is that
 21 correct?
 22 A. Yes.
 23 Q. Is that also a source of contamination of
 24 aquifers, if water from a lower surface is coming, a
 25 lower zone is coming to the surface?

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1 A. Yes.
 2 Q. Okay. Does Marathon have any position with
 3 respect to the source of the groundwater pollution
 4 that my clients are complaining of?
 5 A. Not that I'm aware of.
 6 Q. Does Marathon have any monitoring wells installed
 7 on properties in and around its wells in the East
 8 Poplar Oil Field?
 9 A. I don't know.
 10 Q. Do you know if Marathon or Texas Oil & Gas ever
 11 had any monitoring wells in the area around these
 12 three wells in the East Poplar Oil Field?
 13 A. I don't know.
 14 Q. How can saltwater move up from behind the well
 15 casing from the saltwater zone to the surface and not
 16 impact any freshwater zones that it encounters?
 17 A. It's going to go to where the lowest pressure is.
 18 Q. Okay.
 19 A. If the surface has lower pressure, it will
 20 preferentially go there versus any other zone.
 21 Q. And that's just a general rule?
 22 A. It's fluid movement.
 23 Q. Okay. No exceptions to it?
 24 A. Not that I can think of.
 25 Q. In terms of your review of the documents, did you

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1 review any of the underground geology?
 2 A. No, I did not.
 3 Q. Okay. Are you familiar with the Tyler formation?
 4 A. No, I'm not.
 5 Q. So you couldn't tell me whether the Tyler
 6 formation could hold a saltwater column to the surface
 7 back in 1970?
 8 A. No, I could not.
 9 Q. The same would be true with the Kibby formation?
 10 A. I couldn't tell you.
 11 Q. Okay. Same question and same answer for the
 12 Charles formation?
 13 A. Yes.
 14 Q. How about the Judith River formation where the
 15 injection was?
 16 A. I don't know about that, either.
 17 Q. Is the Judith River formation a freshwater-
 18 bearing zone in the area of the East Poplar Oil Field?
 19 A. I never did see a water analysis of the Judith
 20 River, so I don't know.
 21 Q. In terms of formation pressure and ability to
 22 hold a saltwater column to the surface, is that kind
 23 of what we were talking about earlier on with the
 24 saltwater disposal well?
 25 A. I'm not sure what you mean, I guess, or what

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1 earlier.
 2 Q. Well, can you tell me whether or not you can take
 3 formation pressure and determine whether it will hold
 4 a saltwater column to the surface?
 5 A. If you know the density of the saltwater, you can
 6 calculate how much pressure that exerts at a given
 7 depth.
 8 Q. Okay. So it's possible to determine that?
 9 A. Yes.
 10 Q. Okay. And if it goes to the surface, is it
 11 possible for that saltwater to contaminate
 12 groundwater?
 13 A. Again, it depends on the pressure.
 14 Q. Okay. And is it true that formation pressures,
 15 there's differing pressures underneath the surface of
 16 the earth depending on depth, for example?
 17 A. Yes.
 18 Q. The deeper you go, the higher the pressure is?
 19 A. Not always.
 20 Q. When would that not be the case?
 21 A. If there had been production from or injection
 22 into zones, historically it could change that pressure
 23 profile. During the geologic burial of some
 24 formations, pressures, higher pressures could be
 25 trapped during the burial.

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1 Q. Okay. And those formations could contain
 2 saltwater, correct?
 3 A. Yes.
 4 Q. Could contain water?
 5 A. Yes.
 6 Q. Clean water?
 7 A. Yes.
 8 Q. Could contain oil?
 9 A. Yes.
 10 Q. Sand?
 11 A. Yes.
 12 Q. I think I may have asked you this before, but I'm
 13 not sure. I just want to make sure I'm clear on this.
 14 Aside from the flow line that we were talking about
 15 with respect to these oil wells here, are you aware of
 16 any other pipelines that were used in connection with
 17 these particular oil wells or saltwater disposal
 18 wells?
 19 A. No, I am not.
 20 Q. And you reviewed the records and found no
 21 evidence of any?
 22 A. That's correct.
 23 Q. From my reading of the records, too, there were
 24 no saltwater disposal pits on this property; is that
 25 correct?

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1 A. That's correct.
 2 Q. Aside from disposal pits and underground
 3 injection, trucking away of saltwater, are there other
 4 ways of disposing of saltwater?
 5 A. Evaporation pits.
 6 Q. Okay. Is that the same as reserve pits?
 7 A. The reserve pit is generally associated with the
 8 drilling process.
 9 Q. Okay. And the evaporation pit, I take it there
 10 were no evaporation pits associated with this, either?
 11 A. There was a pit. I'm not sure what the purpose
 12 of it was.
 13 Q. And the pit that you talked about, did they put
 14 saltwater in it, do you know?
 15 A. I don't know what they put in it.
 16 Q. Okay. Just a pit?
 17 A. A pit that was lined.
 18 Q. What was it lined with, if you know?
 19 A. It did not indicate what the lining material was.
 20 Q. Okay. In the answers to interrogatories - do
 21 you have those in front of you?
 22 A. No, I don't.
 23 Q. I'm sorry. Here we go (handing).
 24 There are a number of people listed in answer to
 25 Interrogatory No. 3 on page 6 who are knowledgeable

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1 about the operations of Marathon and Texas Oil & Gas;
 2 is that correct? Do you see that?
 3 A. Yes.
 4 Q. And your name is the first one listed there; is
 5 that correct?
 6 A. Yes.
 7 Q. Okay. And when did you first become aware of
 8 this litigation?
 9 A. A little over a year ago.
 10 Q. And you first became aware that you would be the
 11 corporate designate about two months ago?
 12 A. Or I believe within the last month,
 13 approximately.
 14 Q. Can you tell me who Mr. Mike Quick is?
 15 A. He was in the environmental and safety group.
 16 Q. He's no longer employed there?
 17 A. He retired.
 18 Q. Is he still in the Wyoming/Cody area?
 19 A. Yes, he is.
 20 Q. How about Mr. or San Felipe?
 21 A. That's an address.
 22 Q. Oh, it is. You're correct. I'm sorry.
 23 R. G. Becker?
 24 A. I don't know what his current status is.
 25 Q. T. E. Croft?

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1 A. I don't know.
 2 Q. Leo Heath?
 3 A. Don't know.
 4 Q. P. A. Kriz?
 5 A. Don't know.
 6 Q. Howard Gordon?
 7 A. I don't know.
 8 Q. E. J. Quinlan?
 9 A. I don't know.
 10 Q. Tom Leinen?
 11 A. I don't know.
 12 Q. Walt Dyer?
 13 A. I don't know.
 14 Q. Mike Walen?
 15 A. Don't know.
 16 Q. H. J. Kagie?
 17 A. Don't know.
 18 Q. M. David Clouatre?
 19 A. Don't know.
 20 Q. Sheila Willoughby?
 21 A. Don't know.
 22 Q. A. D. Carter, Jr.?
 23 A. I don't know.
 24 Q. Okay.
 25 If you could turn to page 8, Request for

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1 Admission No. 1?
 2 A. (Complied with request.)
 3 Q. If you could read the response, the Request for
 4 Admission No. 1 and the response?
 5 (Pause.)
 6 BY MR. GALLIK:
 7 Q. Had a chance to read that?
 8 A. Yes.
 9 Q. Okay. I take it, out of fairness, that you
 10 didn't participate in the drafting of these answers,
 11 correct?
 12 A. That's correct.
 13 Q. Okay. And I believe I asked you this. Marathon
 14 has not conducted any testing to indicate that the
 15 water is not contaminated, has it?
 16 A. Not to my knowledge.
 17 Q. Okay. Part of the response indicates that,
 18 states that, "The report," referring to the Thamke and
 19 Craigg report, "indicates that there is only 'possible
 20 moderately apparent' contamination of groundwater in
 21 the area in which Marathon's predecessor conducted
 22 operations, an area in which no drinking water wells
 23 are located."
 24 Does that mean that simply because there are no
 25 drinking wells located in that particular area, that

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1 somehow that's in a discrete aquifer as opposed to the
 2 balance of the aquifer in the East Poplar Oil Field?
 3 A. I don't know.
 4 Q. If you could turn to page 10?
 5 A. (Complied with request.)
 6 Q. Request for Admission No. 2, "Please admit that
 7 brine is a byproduct of the production of crude oil in
 8 the East Poplar Oil Field." Do you know what brine
 9 is?
 10 A. No.
 11 Q. That's not a term that's used in the --
 12 A. We refer to it as the produced water.
 13 Q. Okay.
 14 A. Or any fluid that comes out is produced water or
 15 oil or gas.
 16 Q. Okay. And the water can take on various forms,
 17 including saltwater, correct --
 18 A. Yes.
 19 Q. -- if it has a certain level of sodium?
 20 A. Yes.
 21 Q. In your business, is there a certain level of
 22 sodium that must be present before it becomes
 23 characterized as saltwater?
 24 A. I don't know.
 25 Q. Okay. Why is it that oil companies have

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1 injection wells?
 2 A. Injection wells or disposal wells?
 3 Q. Well, let's start with injection wells.
 4 A. Injection wells would be for the purposes of
 5 increasing oil production through pressure
 6 maintenance.
 7 Q. So as I understand it, then, that you can use
 8 some of the byproduct of the oil production to
 9 increase the oil that comes to the surface for
 10 purposes of your producing oil for putting into
 11 barrels and shipping out to market, correct?
 12 A. Yes.
 13 Q. Okay. And then the disposal well, what's the
 14 purpose of that?
 15 A. Would be for disposing of water that you do not
 16 find a beneficial use for on the producer interval.
 17 Q. Okay. Why is it that companies don't just dump
 18 that water on the ground?
 19 A. To prevent pollution.
 20 Q. So the water often contains contaminants or
 21 pollution?
 22 A. I guess "often" is -- there are a lot of fields
 23 that I am familiar with that do dispose of the water
 24 on the surface.
 25 Q. So depending on the water quality, you could

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1 dispose of it on the surface?
 2 A. Yes.
 3 Q. And if you go to the expense of drilling a
 4 disposal well, that would indicate to me that it's
 5 probably water that you just can't dispose of on the
 6 surface?
 7 A. Yes.
 8 Q. Otherwise, it would be very inexpensive to
 9 dispose of it on the surface?
 10 A. Correct.
 11 Q. Do you know what sort of analysis is done to
 12 determine what aquifer the production water is to be
 13 disposed in?
 14 A. No, I don't.
 15 Q. Is Marathon conducting -- I just want to make
 16 sure I'm clear on this question. My understanding is
 17 that Marathon has done no investigation to determine
 18 the source or extent of the contamination of the East
 19 Poplar Oil Field. Is that fair?
 20 A. To my knowledge, they have not.
 21 Q. And does that include, and this is what I want to
 22 make sure I'm clear, does that include inhouse
 23 employees as opposed to experts hired outside the
 24 company?
 25 A. I don't know.

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1 (Pause.)
 2 BY MR. GALLIK:
 3 Q. Does Marathon have any policies or procedures
 4 with respect to disposing of saltwater in underground
 5 zones?
 6 A. As part of the permitting process for disposal or
 7 injection into underground zones, there are certain
 8 requirements.
 9 Q. Okay. And what would those requirements be?
 10 A. There are pressure limitations.
 11 Q. And when you say "pressure limitations," what
 12 does that mean?
 13 A. An upper pressure limit which will not be
 14 exceeded. We generally indicate the volume of water
 15 that we anticipate injecting, into which formation,
 16 where the produced -- or where the fluid that's being
 17 injected will be coming from.
 18 Q. When you say an "upper pressure limit" -- is that
 19 right?
 20 A. Yes.
 21 Q. To put that in terms that I can understand,
 22 you're talking about the pressure within the zone that
 23 you're injecting?
 24 A. Yes.
 25 Q. So there's a limit? When you inject waste water

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1 into a zone, I take it you're increasing the pressure
 2 that's in there?
 3 A. Potentially.
 4 Q. Potentially. And when you say an upper pressure
 5 limit with respect to that zone, are you talking about
 6 making sure that by disposing of water into that zone,
 7 you're not increasing the pressure to a certain extent
 8 that could potentially cause problems for you?
 9 A. Yes.
 10 Q. Okay. Have you made any sort of analysis of the
 11 records that you reviewed and compared those to
 12 Marathon's policy with respect to disposal wells to
 13 see if the records indicate that the practices in this
 14 case were followed according to Marathon's policies?
 15 A. The only indication I saw was that the disposal
 16 well would have a high and low pressure shutdown --
 17 Q. Um-hmm.
 18 A. -- to make sure that injection was staying in the
 19 target zone.
 20 Q. Okay. When you say that was the only indication
 21 you had, I guess I'm not quite clear on what you mean.
 22 You mean that's the only indication you were able to
 23 compare to Marathon's policy?
 24 A. That's the only document I saw that indicated
 25 comparison.

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1 Q. So that was the only basis upon which you could
2 make any comparison?
3 A. Yes.
4 Q. And that document indicates that there was a high
5 and low pressure relief measure?
6 A. Yes.
7 Q. And that's consistent with your policy?
8 A. Yes.
9 Q. In any sort of injection or, I'm sorry, disposal
10 wells that you have operating in the field now, are
11 there other documents that you keep in the ordinary
12 course of business that you did not see in Texas Oil &
13 Gas's files?
14 A. No.
15 Q. Okay. In Request for Production No. 34, we asked
16 that copies of all internal policies, procedures,
17 rules or restrictions governing the abandonment and
18 capping of oil wells be produced, and your response
19 was that Marathon searched the records of TXO and was
20 unable to locate any responsive documents.
21 Have you located any other documents or reviewed
22 any documents that would be responsive to that?
23 A. No.
24 Q. Okay. Does Marathon have any internal policies,
25 procedures, rules, restrictions regarding the

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1 abandonment and capping of oil wells?
2 A. We follow the procedure I mentioned earlier where
3 a plan is submitted to the regulatory agencies for
4 approval prior to the plugging.
5 Q. Okay. So you're following, in part, rules and
6 regulations handed down by state and federal agencies?
7 A. Yes.
8 Q. And then is it fair to say that the details of
9 that plan are somewhat dependent upon the site where
10 you're operating?
11 A. Yes.
12 Q. Nuances with respect to the well and the area and
13 the geology?
14 A. Yes.
15 MR. GALLIK: Let's take a five-minute break
16 here.
17 (Recess taken from 11:12:23 to 11:19:37.)
18 BY MR. GALLIK:
19 Q. Just a couple of quick questions, and then we'll
20 be done here.
21 The pit that we were talking about earlier that
22 you weren't sure what the purpose was -- is that a
23 fair characterization of your testimony?
24 A. Yes.
25 Q. Did you see any documentation on how that pit was

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1 cleaned up?
2 A. No, I did not.
3 Q. So you have no knowledge of how that pit was
4 cleaned up, then?
5 A. No.
6 Q. When a person has a saltwater -- is it fair to
7 call it disposal pit, saltwater disposal pit?
8 A. I'm not sure what they put in that pit.
9 Q. Let's talk about Marathon in general, okay?
10 A. Okay.
11 Q. You have some saltwater disposal pits on site?
12 A. We have produced water.
13 Q. Which could amount to water containing excessive
14 amounts of sodium chloride?
15 A. Sodium chloride. I wouldn't go so far as to say
16 excessive amounts.
17 Q. Does Marathon have a policy with respect to
18 whether it disposes of the water in a pit or injects
19 it into the surface?
20 A. It varies by field location.
21 Q. Okay. And what are some of the factors that
22 would persuade the company to dispose of the water in
23 a pit as opposed to a disposal well?
24 A. The terrain, if there's running water in the
25 area, natural running water. That, in my mind, would

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1 be the primary issues.
2 Q. And when you say "if there's natural running
3 water," like a river or creek?
4 A. Yes.
5 Q. When you say "in the area," is that 100 yards,
6 50 yards, half mile?
7 A. I guess the fields that I am familiar with, the
8 live running water runs right through the middle of
9 the producing fields.
10 Q. I see. And with disposal pits, is the theory
11 behind disposing of the water in the pits that it
12 evaporates?
13 A. Yes, and in our operations they are only
14 temporary holding facilities.
15 Q. Okay. Temporary, and then they could either be
16 trucked off or disposed of in a well?
17 A. Yes.
18 Q. And these pits, I take it, are lined?
19 A. In our operations, they are not because our water
20 is not a high salt content.
21 Q. And so you would test the water before you make a
22 decision on whether to use a pit, then?
23 A. Yes.
24 Q. Okay. With respect to cleanup of the pits, is
25 there any policy or procedure that Marathon follows

1 with respect to that remediation?

2 A. The area around the pits is sampled.

3 Q. Okay.

4 A. Groundwater samples are taken and sent in to the
5 regulatory agencies to determine if any
6 decontamination or cleanup work needs to be done prior
7 to filling and reclaiming those pits.

8 Q. In the operation that Marathon currently has,
9 let's say, in northwestern Wyoming, is it common to
10 have monitoring wells in the freshwater aquifer zones,
11 if they are present?

12 A. I don't know.

13 MR. GALLIK: I don't have any further
14 questions. Thank you for your time.

15 The court reporter, your attorney will tell
16 you, will send you a copy of this for your review and
17 corrections, if any need to be made.

18 MR. MURPHY: And we would like you to read
19 and sign it.

20 MR. ROSS: No questions.

21 MR. STERUP: No questions.

22 MR. WEBSTER: No questions.

23 MR. MURPHY: Thanks.

24 (Proceedings were concluded at 11:23:36.)

25

DEPONENT'S CERTIFICATE

I, Falinda R. Hall, do hereby certify that I have read the foregoing 89 pages of typewritten material and that the same is, with any changes noted below, a full, true, and correct transcript of my oral deposition given at the time and place hereinbefore mentioned.

PAGE LINE CORRECTION

REASON FOR CORRECTION

Falinda R. Hall

Subscribed and sworn to before me this _____
day of _____, 2001.

Notary Public

For the State of _____

Residing at _____

(Seal)

My commission expires:
_____.

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REPORTER'S CERTIFICATE


I, JoAnn C. Bacheller, a Registered
Diplomate Reporter and Certified Realtime Reporter,
certify that the deponent, Falinda R. Hall, was first
duly sworn by me to testify the truth; that I was then
and there authorized to administer an oath; that her
deposition was reported by me in machine shorthand and
thereafter reduced to typewriting using computer-
assisted transcription; that after being reduced to
typewriting, the original of this transcript was
retained by the reporter and a copy mailed to the
deponent for her examination and signature; and that
this is a true and correct record of the testimony
given by said deponent.

I further certify that I am not attorney
for, nor employed by, nor related to any of the
parties or attorneys to this action, nor financially
interested in the action.

IN WITNESS WHEREOF, I have set my hand and
seal at Billings, Montana this 7th day of July, 2001.

(Seal)

My commission
9-20-04.


JoAnn C. Bacheller
Registered Diplomate Reporter
Certified Realtime Reporter
Notary Public for the
State of Montana

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